

Work Order ID 107873

October-04-13 1:23:48 PM

107873

Page 1

Item ID: D6005-128 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Crosstube Material
 Start Date: 10/04/13 Start Qty: 30.00 ***30*** Cust Item ID:
 Required Date: 12/15/14 Req'd Qty: 30.00 ***30*** Customer:
 Reference:

Approvals: Process Plan: MLJ Date: 13-10-04 Tooling: Date: Run Start ***NR1***
 QC: Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D6005	B								

100 PURCHASING 0.00
100
 Purchasing
 Purchasing
 Memo
 Issue P/O: 21670 0.00
CY 13/10/10 28

- a) Extrude as per Dwg D6005 length = 128" (Ref. D6005-128)
- b) Material: 7075-T6/T6511 (WW-T-700/7 or QQ-A-225/9 or QQ-A-200/11))
Seamless aluminum tube
- c) Minimum ultimate tensile strength = 77ksi
- d) Minimum tensile yield strength = 66ksi

Ensure material certification is attached

EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS.

MUST BE WELL PACKAGE, IF NOT IT WILL BE REFUSE

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Work Order Update ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐															
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐															
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐															
Large Fab ☐	Composite ☐	Supplier ☐																

Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

FAULT CATEGORY

Landing Gear	General	Other
☐ Bending	☐ Bend	☐ Grain
☐ Centre Not Concentric to O/S	☐ BOM/Route	☐ Hardware
☐ Cracks	☐ Broken/Damaged	☐ Inspection Incomplete
☐ Crushed/Crimped	☐ Burrs	☐ Instructions Incomplete/Unclear
☐ Cuffs	☐ Contamination	☐ Maintenance
☐ Heat Treat	☐ Countersink	☐ Mislabeled
☐ Inspection Strip in Tube	☐ Cut Too Short	☐ Misread
☐ Ripples in Bend	☐ Drill Holes	☐ Offset
☐ Torque Waves in Extrusion	☐ Drawing	☐ Out of Calibration
☐ Turning Sequence	☐ Finish	☐ Out of Sequence
☐ Wave/Twist in Tube	☐ Folio	☐ Outside Dimensions
		☐ Ovalized
		☐ Over/Under tolerance
		☐ Part Incorrect
		☐ Part Lost/Missing
		☐ Part Moved
		☐ Positioned Wrong
		☐ Power Loss/Surge
		☐ Pressure/Forced
		☐ Temperature/Cure
		☐ Weld
		☐ Wrong Stock Pulled
		☐ Other

107873

October-04-13 1:23:48 PM

N900040100

Setup Start *NS1*

Stop ***NS2***

30

30

Run Start *NR1*

Stop *NR2*

0.00

30x SP14-12-15

35 15-03-19. DAS
9
9-89

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Work Order Update ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Crosstube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data ☐											
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Setup ☐											
Other ☐											
Process ☐											
Supplier ☐											
Training ☐											
Unapproved ☐											
FAULT CATEGORY											
Landing Gear ☐ Bending ☐ Centre Not Concentric to O/S ☐ Cracks ☐ Crushed/Crimped ☐ Cuffs ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Ripples in Bend ☐ Torque Waves in Extrusion ☐ Turning Sequence ☐ Wave/Twist in Tube			General ☐ Bend ☐ BOM/Route ☐ Broken/Damaged ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drill Holes ☐ Drawing ☐ Finish ☐ Folio			☐ Grain ☐ Hardware ☐ Inspection Incomplete ☐ Instructions Incomplete/Unclear ☐ Maintenance ☐ Mislabeled ☐ Misread ☐ Offset ☐ Out of Calibration ☐ Out of Sequence ☐ Outside Dimensions			☐ Ovalized ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other		

Work Order ID 107873

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Page 3

October-04-13 1:23:48 PM

Item ID: D6005-128 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Crosstube Material
 Start Date: 10/04/13 Start Qty: 30.00 ***30*** Cust Item ID:
 Required Date: 12/15/14 Req'd Qty: 30.00 ***30*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140 *140* QC Quality Control	QC7-Inspect Chemical Conversion Coat Memo DAS 9 9-89	0.00 0.00							
150 *150* Packaging Packaging	Identify as per dwg & Stock Location 6/6 Memo	0.00 0.00							28 ϕ 15/03/21
160 *160* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00							ML5 15-03-23 mf 15-3-23

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Work Order Update ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Crosstube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data ☐											
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Other ☐											
Process ☐											
Supplier ☐											
Training ☐											
Unapproved ☐											
FAULT CATEGORY											
Landing Gear ☐ Bending ☐ Centre Not Concentric to O/S ☐ Cracks ☐ Crushed/Crimped ☐ Cuffs ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Ripples in Bend ☐ Torque Waves in Extrusion ☐ Turning Sequence ☐ Wave/Twist in Tube			General ☐ Bend ☐ BOM/Route ☐ Broken/Damaged ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drill Holes ☐ Drawing ☐ Finish ☐ Folio			☐ Grain ☐ Hardware ☐ Inspection Incomplete ☐ Instructions Incomplete/Unclear ☐ Maintenance ☐ Mislabeled ☐ Misread ☐ Offset ☐ Out of Calibration ☐ Out of Sequence ☐ Outside Dimensions			☐ Ovalized ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other		

October-04-13 1:23:51 PM

107873

D6005-128

Required Date: 12/15/14

Required Qty: 30.00

Comments: IPP Rev:C04.06.15Added tolerance to Step 2KJ/JLM
IPP Rev:D 08-09-23 fixe typo in dwg name DD verified by:EC IPP Rev:E
13.03.11 per dwg rev.b DD verified by:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6005-128P		Purchased	No				Each	0.0000		28			
D6005-128P									**	301		8/14-12-15	
Crosstube Material													

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

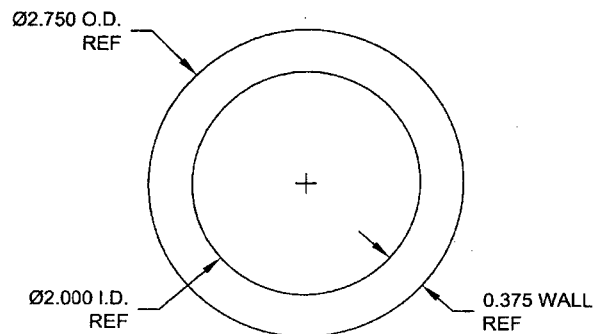
Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Work Order Update ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="width: 25%;">Skid-tube ☐</td> <td style="width: 25%;">Crosstube ☐</td> <td style="width: 25%;">Water Jet ☐</td> <td style="width: 25%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

FAULT CATEGORY

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☐ Heat Treat	☐ Countersink	☐ Mislabeled
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		☐ Power Loss/Surge
		☐ Pressure/Forced
		☐ Temperature/Cure
		☐ Weld
		☐ Wrong Stock Pulled
		☐ Other

SPECIFICATION CONTROL DRAWING



107873 MLS
13-10-04

NOTES

- 1) D6005-XXX CROSSTUBE
LENGTH

WHERE XXX IS LENGTH IN INCHES
EG. 128" LONG TUBE: D6005-128

- 2) MATERIAL: 2.750 OD x 0.375 WALL 7075-T6/T6511 SEAMLESS ALUMINUM TUBE.
PER ASTM B210 OR WW-T-700/7 OR QQ-A-225/9 OR QQ-A-200/11
MINIMUM ULTIMATE TENSILE STRENGTH = 77 ksi
MINIMUM YIELD TENSILE STRENGTH = 66 ksi

- 3) TOLERANCES ARE AS FOLLOWS:
O.D.: ± 0.008 MEAN (±0.012 INCLUDING OVALITY)
WALL: ±0.015 MEAN (±0.038 INCLUDING ECCENTRICITY)
LENGTH: XXX +0.125/-0.000
STRAIGHTNESS: 0.010" DEVIATION / 12" LENGTH

- 4) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.

- 5) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1

RELEASED
13/2/7
PER ECU 15-557

B	O.D. TOL. NOW 0.008 WAS 0.006, ADD ASTM B210	CP	12.10.29
A	NEW ISSUE	CP	00.11.17
REV.	DESCRIPTION	BY	DATE
DESIGN		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN			
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D6005	SHEET 1 OF 1
APPROVED		TITLE	SCALE
DE APPR.		CROSSTUBE MATERIAL	NTS
DATE	12.10.29	COPYRIGHT © 2000 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

Aluminiumwerk Unna AG · Uelzener Weg 36 · D-59425 Unna

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ONT, K6A1K7
Canada

Aluminiumwerk Unna AG

Uelzener Weg 36 · D-59425 Unna

Postfach 11 46 · D-59401

fon +49 (0) 23 03-206 - 0

fax +49 (0) 23 03-206- 116

info@alunnatubes.com

www.alunnatubes.com

page: 1

date: 11.11.2014

customer: 40980

delivery note

84840

your PO dated: 10.10.2013

your PO No.: PO21670

confirmation No.: 51529

contact: Petra Eisenblätter

Tel.: + (303) 755 5672

Fax: + (303) 755 5936

representative: CLAUS J. BETTER

CARRIER: Senator International S

your VAT No.:
AWU VAT No.: DE177869055

Country of origin: Germany

We supply acc. to our delivery terms and conditions:

item	quantity	unit	net kgs
1500	30,000	PC	

AWU article: 36744 / Tariff no. 76082081

Customer article: D6005-128 2.750 X 0.375 X 128 / cust. drwg.

product: Tubes / seamless extruded / EN AW-7075 / round

condition: T 6511 / AMS-QQ-A-200/11

outer diameter: 2,750 INCH Tol. +0,012 -0,012

tol. for mean OD +0,006 -0,006

inner diameter: 2,000 INCH

wall thickness: 0,375 INCH Tol. +0,038 -0,038

fixed length 128,000 INCH Tol. +0,125

test report acc. to EN 10204/3.1 / RM 531 / Rp0,2: 455

straightness 0,01 INCH / 1 FEET / RMS outer 25

tol. on quantity +10 % -10 % / scurfed

2.750" OD 0.375" Wall, 128" lengths

Part Number D6005-128 crosstube

Surface Finish max. RMS 25

Tolerances per ASTM B210 / your drawing D6005

Tubes protected with corrosion protective oil

Tubes line marked

Commerzbank AG, Unna

Konto-Nr. 102 56 00 · BLZ 443 400 37

BIC/S.W.I.F.T. - Code: COBADE FF 443

IBAN: DE 90 4434 0037 01025600 00

Sitz der Gesellschaft: Unna

Amtsgericht Hamm, HRB 3045

Vorstand: Volker Findeisen

Vorsitzender des Aufsichtsrats: Thomas Wiese

- Allgemeine Lieferungs- und Zahlungsbedingungen -
(nur kaufmännischer Verkehr)

[illegible]

7. Schutzrechte Dritter

[illegible]

1990年，在“中国改革二十年”的纪念大会上，江泽民总书记在讲话中，第一次正式提出“社会主义市场经济”的概念。1992年，党的十四大正式确立社会主义市场经济体制的改革目标。1993年，党的十四届三中全会通过的《中共中央关于建立社会主义市场经济体制若干问题的决定》，对社会主义市场经济体制的基本框架进行了全面部署。1997年，党的十五大进一步明确了建立社会主义市场经济体制的目标和任务。2001年，中国正式加入世界贸易组织（WTO），标志着中国全面融入世界经济体系。2008年，国际金融危机爆发，中国通过实施积极的财政政策和适度宽松的货币政策，成功抵御了金融危机的冲击，保持了经济平稳较快发展。2012年，党的十八大提出“科学发展观”，强调以人为本、全面协调可持续发展。2013年，党的十八届三中全会通过的《中共中央关于全面深化改革若干重大问题的决定》，对全面深化改革进行了总体部署。2017年，党的十九大提出“新时代中国特色社会主义思想”，强调坚持以人民为中心的发展思想，坚持新发展理念，推动高质量发展。2020年，中国全面建成小康社会，历史性地解决了绝对贫困问题。2021年，中国共产党成立一百周年，中国进入全面建设社会主义现代化国家新征程。2022年，党的二十大提出“全面建设社会主义现代化国家，实现中华民族伟大复兴”，强调坚持高质量发展，坚持创新驱动发展战略，坚持深化改革开放，坚持全面从严治党，坚持人与自然和谐共生，坚持总体国家安全观，坚持推进祖国统一大业，坚持推动构建人类命运共同体。

Aluminiumwerk Unna AG · Uelzener Weg 36 · D-59425 Unna

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fax +49 (0) 23 03-206- 116

info@alunnatubes.com
www.alunnatubes.com

page: 1
date: 11.11.2014
customer: 40980

delivery note

84840

your PO dated: 10.10.2013
your PO No.: PO21670
confirmation No.: 51529

contact: Petra Eisenblätter
Tel.: +(303) 755 5672
Fax: +(303) 755 5936
representative: CLAUS J. BETTER

CARRIER: Senator International ~~See~~ your VAT No.:

AWU VAT No.: DE177869055

Country of origin: Germany

We supply acc. to our delivery terms and conditions:

item	quantity	unit	net kgs
1500	30,000	PC	

AWU article: 36744 / Tariff no. 76082081

Customer article: D6005-128 2.750 X 0.375 X 128 / cust. drwg.

product: Tubes / seamless extruded / EN AW-7075 / round

condition: T 6511 / AMS-QQ-A-200/11

outer diameter:	2,750 INCH Tol.	+0,012	-0,012
tol.for mean OD		+0,006	-0,006
inner diameter:	2,000 INCH		
wall thickness:	0,375 INCH Tol.	+0,038	-0,038
fixed length	128,000 INCH Tol.	+0,125	

test report acc. to EN 10204/3.1 / RM 531 / Rp0,2: 455

straightness 0,01 INCH / 1 FEET / RMS outer 25

tol. on quantity +10 % -10 % / scurfed

2.750" OD 0.375" Wall, 128" lengths

Part Number D6005-128 crosstube

Surface Finish max. RMS 25

Tolerances per ASTM B210 / your drawing D6005

Tubes protected with corrosion protective oil

Tubes line marked

Commerzbank AG, Unna
Konto-Nr. 102 56 00 · BLZ 443 400 37
BIC/S.W.I.F.T. - Code: COBADE FF 443
IBAN: DE 90 4434 0037 01025600 00
Sitz der Gesellschaft: Unna
Amtsgericht Hamm, HRB 3045
Vorstand: Volker Findeisen
Vorsitzender des Aufsichtsrats: Thomas Wiese

- Allgemeine Lieferungs- und Zahlungsbedingungen -
(nur kaufmännischer Verkehr)

[illegible]



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

OUTSTANDING PO REPRINT

Purchase Order ID PO21670

Purchase Order Date 10/10/2013

PO Print Date 9/10/2014

Page Number 3 of 4

Order From : VU-ALU001
ALUMINIUMWERK UNNA AG
630 3033 SOUTH PARKER RD
AURORA, CO 80014
USA

Ship To: DART AEROSPACE LTD
1270
ABERD
EEN
HAWKE
SBURY,
ON
K6A
1K7
CANAD
A

Contact Name		Buyer	Chantal Lavoie
Vendor Phone	303 755 5672	Customer POID	
Vendor Fax	303 755 5936	Customer Tax #	10127-2607
Ship To Contact		Terms	Wire
Ship To Phone		Currency	USD
Ship Method	Contract Shipping	FOB	EXW - (Ex Works)
Ship Aect			

Line	Item ID	Description/	Req Date/	Req Qty	Extended
Sub	Vendor Part Number	Mfg ID	Taxable		Price
	Line Comments				
	Delivery Comments				

10	D6005-12RP	Crosstube Material	12/15/2014	28.00	\$14,644.00
			Yes	Each	
	AS PER DWG D6005 REV.B		12/15/2014		
	B107873				

recu 30x
SP 14-12-15

Line Total: \$14,644.00

11	D6004-11SP	Crosstube Material	12/15/2014	36.00	\$15,228.00
			Yes	Each	
	AS PER DWG D6004 REV. A		12/15/2014		
	B107870				

Line Total: \$15,228.00

7/10/2014

Abnahmeprüfzeugnis 3.1 - DIN EN 10204:2005

Inspection Certificate 3.1 - DIN EN 10204:2005 / Certificat de Reception 3.1- DIN EN 10204:2005

Kunde: Dart Aerospace Ltd.
Client:

1270 Aberdeen Street
K6A1K7 Hawkesbury, ON Canada

Zeugnisnummer: 1446/14

Cert No.: / No. du certificat:

Bestellnummer: PO21670

Order No. / No. de commande

Auftrag: 51529/1500

Our Reference/Notre Reference:

Produkt: Rohre nahtlos gepresst

Product / Produit: Tubes seamless extruded

Spezifikation: AMS - QQ - A - 200/11; -

Specification:

Werkstoff: 7075

Alloy/Alliage:

Zustand: T 6511

Temper/État

Abmessung: 2,750 INCH x 2,000 INCH x 0,375 INCH x 128,000 INCH

Size / Dimension D6005-128

Kennzeichnung: ALUnna - Cert No. 1446/14 - 7075 - T 6511 - Cast No.- AMS - QQ-A - 200/11 - 2.750" OD X 0.375" Wall - Heat Lot No.

Marking/Marquage: 1402199 - ALUnna Order Conf. No. 51529/1500-1 - PO. 21670

Lieferung

Delivered Material / Matériel délivré:

pcs.

lbs

Country of Manufacture: Germany

30

1085

Products are in accordance with applicable RoHS

1. Chemische Analyse

Chemical Analysis / analyse chimique

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Zr	Bi	Sn	Na
Charge/ min.			1,2		2,1	0,18	5,1						
Cast No. max.	0,40	0,50	2,0	0,30	2,9	0,28	6,1	0,20					
2483/14	0,125	0,213	1,645	0,083	2,434	0,200	5,630	0,053	0,003	0,0182	0,0001	0,0017	0,0001

Hydrogen content: 0,10

ccm/100 g Al Elements without indication < 0,01 %

country of melt manufacturer: Germany

2487/14	0,154	0,242	1,485	0,117	2,450	0,194	5,708	0,042	0,003	0,0293	0,0001	0,0016	0,0001
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Hydrogen content: 0,10

ccm/100 g Al Elements without indication < 0,01 %

country of melt manufacturer: Germany

2. Mechanische Eigenschaften

Mechanical Properties / Valeurs Mécaniques

Anforderungen Requirements	tensile (Rm) ksi	yield (Rp0,2) ksi	elongation 2" %	elongation A %	Hardness HB	Cast No.
	81,0	73,0	7,0			
1	86,130	79,605	7,0			2483 - 20 pcs. ✓
2	86,565	79,750	8,0			
3	85,405	78,880	9,0			2487 - 10 pcs. ✓

RMS: outside 25 - max. 12,0 µ"

**Ergebnis der
Prüfungen:**

Es wird bestätigt, daß die Lieferung geprüft wurde und den Vereinbarungen bei der Bestellannahme entspricht

Test results:

We confirm that the delivery has been tested and applies to the agreements made on receipt of the order

Resultats:

Nous confirmons que la livraison a été contrôlée et correspond avec les conventions faites à la réception de la commande

mergardtri



Certified acc. DIN EN ISO 9001:2008 and DIN EN 9100:2009

valid until 2016-11-10

Cert.- Req. No.: 001959 QM08; 001959 ASH 09-1

11.11.2014



ALUnna

Abnahmebeauftragter

Aluminiumwerk Unna AG, Uelzener Weg 36, 59425 Unna, Germany

514-12-15